

**Study Group on Enhancing  
Multilateral Export Controls  
For US National Security**

**Final Report**

**April 2001**

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## **ABOUT THE REPORT**

This report presents the consensus findings and recommendations of the “Study Group on Enhancing Multilateral Export Controls for US National Security,” which was established under the direction of the 106th US Congress. In October 1999, the Conference Report of the National Defense Appropriations Act of Fiscal Year 2000 directed the Department of Defense to “convene a Study Group of senior-level executive branch and congressional officials, as well as outside experts, to develop the framework for a new effective, COCOM-like agreement that would regulate certain militarily useful goods and technologies on a multilateral basis.” The Study Group was chaired by four members of Congress: Senator Michael B. Enzi (R-WY), Senator Jeff Bingaman (D-NM), Congressman Christopher Cox (R-CA) and Congressman Howard L. Berman (D-CA). Staffing support for the Study Group’s work and activities was provided by The Henry L. Stimson Center and the Europe Program of the Center for Strategic and International Studies. The Group included serving and former members of Congress, current and former senior-level officials from the Department of Defense, Department of State, and Department of Commerce, respected defense analysts, and representatives of US industry. The Study Group took up its mandate in September 2000 and completed its charge in April 2001.

The Study Group proceeded from the premise that improvements to the current system of export controls were needed and that an effective solution would require a multilateral approach that could win bipartisan support and engage all major stakeholders in the process—the president and executive branch of the US government, the US Congress, and industry. Further, the Study Group took up its work in the belief that only the United States could provide the leadership necessary to address the shortcomings of the existing multilateral export control system.

In the course of its work, the Study Group explored the fundamental issues associated with the effective control of sensitive technologies and weighed an extensive set of alternative measures and solutions. Discussions were wide-ranging, touching on such “first-principle” questions as the purpose of strategic export controls, the nature of technological innovation and diffusion, the threats to US national security interests in the 21<sup>st</sup> century, and the implications of globalization and transformative changes in the international strategic environment for US leadership and power. Additionally, the Study Group considered both the shortcomings and accomplishments of past and current multilateral regimes and the relationship between national export controls and multilateral mechanisms to control technology transfers.

The Study Group's discussions and deliberations were informed by diverse and rich sources of expertise and analysis. First, the members of the Study Group themselves brought to this task extensive first-hand experience and knowledge of export control policies and practices, and of the economic, political, and strategic issues related to the control of sensitive military and dual-use goods and technologies. Additionally, respected US and European experts were asked to prepare in-depth analyses of key issues related to technology, proliferation, current export controls outside the United States, and alternative multilateral export control structures. Informal discussions with European allies and other close partners provided alternative perspectives on the current system of multilateral controls and insights regarding developments abroad that might pertain to the success or failure of any US-led reform initiatives.

This report represents the consensus findings of the Study Group's members. Members whose names appear below support the general thrust of the report and its recommendations, though not necessarily each specific phrase or nuance of wording.

### *Co-Chairs*

*Senator Michael B. Enzi*  
*Senator Jeff Bingaman*

*Congressman Christopher Cox*  
*Congressman Howard L. Berman*

### *Members*

*The Honorable Barry M. Blechman*  
*Mr. William L. Clements*  
*The Honorable Thomas Duesterberg*  
*The Honorable Sue Eckert*  
*The Honorable Paul Freedenberg*  
*The Honorable Phil Gramm*  
*The Honorable John J. Hamre*  
*The Honorable William Inglee*  
*Mr. Joel Johnson*

*The Honorable Arnold Kanter*  
*The Honorable Mel Levine*  
*Mr. Philip A. Odeen*  
*Dr. Alan Platt*  
*The Honorable William Reinsch*  
*The Honorable Peter Rodman*  
*The Honorable Lawrence Scheinman*  
*The Honorable William Schneider*  
*Dr. Simon Serfaty*  
*The Honorable Bruce Weinrod*

***Executive Director:*** *Dr. Cathleen Fisher*

# **Study Group on Enhancing Multilateral Export Controls For US National Security: Final Report**

## **EXECUTIVE SUMMARY**

The system for controlling the export of militarily sensitive goods and technologies is increasingly at odds with a world characterized by rapid technological innovation, the globalization of business, and the internationalization of the industrial base, including that of defense companies. Although efforts have been made to adapt Cold War processes and regulations to changed circumstances, the current approach to controlling militarily relevant trade has failed to keep pace with changing international conditions and often falls short of adequately protecting US national security interests.

Reflecting growing concern with the impact of the current multilateral export control system on US national security, the Congress in October 1999 called for the creation of a Study Group to “develop the framework for a new effective, COCOM-like agreement that would regulate certain militarily useful goods and technologies on a multilateral basis.” This report represents the consensus findings of the resultant Study Group on Enhancing Multilateral Export Controls for US National Security.

## **Part I: Reform of the Export Control System is Vital to US National Security in the 21<sup>st</sup> Century**

While export controls continue to be vital tools of US national security policy, they must be adapted to the global economic, strategic, and political realities of the 21<sup>st</sup> century if they are to enhance US nonproliferation, defense industrial, and alliance objectives. The Study Group therefore considered the implications for effective multilateral export control reform of three factors: (i) the impact of economic globalization; (ii) the emergence of new and diverse threats; and (iii) the changing nature of US national security needs and requirements in the 21<sup>st</sup> century. The Study Group concluded that a multifaceted approach, comprising step-by-step reform of existing regimes and a new, supplemental framework, is needed in order to keep pace with changing political, economic, and technological conditions and to enhance US national security.

## **Part II: A Proposed Comprehensive Approach to Multilateral Export Control Reform**

To establish a new and more effective framework for multilateral export controls, the Study Group recommends the following three steps:

***Recommendation 1: Over the short-run, maintain and improve the Wassenaar Arrangement and other multilateral arrangements; over the medium- to long-term, seek to merge the existing multilateral regimes into a single, maximally effective body, beginning with those focused on preventing WMD proliferation.***

In the short-term, several steps should be taken to improve the workings of the Wassenaar Arrangement: more robust information exchanges, procedural reforms, and an enhanced role for Wassenaar's Secretariat. Additionally, the Study Group recommends that an Executive Council, made up of representatives from each of the existing multilateral regimes, be formed to improve coordination of licensing, reporting, and enforcement standards among the separate regimes. This Council also should examine the feasibility of combining some or all of the multilateral regimes into a single body over the longer term, if such a merger would raise, not lower, the bar for multilateral export controls.

***Recommendation 2: In the interim, work to establish a new supplemental framework for coordinating multilateral export controls based on harmonized export control policies and enhanced defense cooperation with close allies and friends.***

A new, supplemental framework for enhancing multilateral export controls would complement the Wassenaar Arrangement and other multilateral export control regimes. The purpose of the supplemental framework would be two-fold: (1) to enhance common security by placing stricter, identical controls on the most sensitive technologies to end-users outside the framework; and (2) to reform export controls within the framework to facilitate defense cooperation with key allies and friends. Participants would represent a "coalition of the willing," comprising those states willing to enter into a supplemental multilateral export control arrangement and related commitments in exchange for less restrictive trade among the participating nations. The new framework would be based on an executive-level, multilateral



agreement that would entail common export control commitments implemented through binding domestic laws. To overcome foreign policy differences, the framework would rely on a functional approach to export controls that would provide more effective controls over transfer of the most critical technologies to parties outside the framework *and* allow freer access to arms-related and dual-use technologies within the framework (see “Action Agenda,” pp. 37–38, for details).<sup>1</sup>

***Recommendation 3: Seek simultaneous reforms of the US export control process.***

Continuing reforms of the US export control system are critical to US efforts to build confidence and support among allies and friends for reform of multilateral export controls. The Study Group encourages the Congress and the administration to reach agreement on the long-term authorization of a balanced and updated Export Administration Act as soon as possible, and to undertake an overhaul of the regulatory policies and processes for approving export licenses for munitions. Reform efforts should enhance US national security and be guided by the need for greater harmonization, predictability, flexibility and dynamism, efficiency, and coherence. Efforts to improve and supplement existing multilateral regimes should proceed in tandem with initiatives to rationalize and streamline the US export control system.

### **Part III: A Partnership for Change**

Successful reform of the multilateral framework for export controls will require effective domestic and international partnerships and, above all, sustained and concerted US leadership.

***Presidential Leadership is Essential***

Multilateral reform efforts are unlikely to succeed without strong, sustained presidential leadership and involvement, comprising international engagement as well as direction and oversight of the interagency process in the United States. The Study Group therefore urges President George W. Bush to begin a dialogue with US allies and friends about the need for a new approach to restraints on technology transfers and to launch a coordinated diplomatic

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<sup>1</sup> It is expected that all commitments and incentives established under the proposed supplemental framework will be consistent with members’ obligations under other multilateral export control regimes.

initiative to achieve step-by-step reforms of the Wassenaar Arrangement. Additionally, the Study Group recommends that the president make technology transfer issues a high priority in bilateral relations with Russia and the People's Republic of China and urge other allies and friends to do so as well. Finally, continuing efforts to reform US munitions and dual-use export controls are critical. To ensure that reform efforts remain on track, the Study Group urges the president to convene an interagency "Deputies Committee," which would be responsible for ensuring that US export control policies are internally consistent, up-to-date, and consistently applied.

### ***Congress Has a Vital Role to Play in Reform***

The US Congress must bear joint responsibility for efforts to create an effective system of controlling militarily sensitive goods and technologies. The Study Group therefore recommends that the US Congress work to reach agreement on long-term reauthorization of the Export Administration Act, then review and reform the Arms Export Control Act (AECA). To ensure that a process of step-by-step reform proceeds prudently and without injury to US national security, the Congress should encourage the committees of jurisdiction to hold hearings on the operation of multilateral export control arrangements, and require the President to continue reporting annually on the results of US efforts to strengthen existing regimes and further promote multilateral approaches to export controls. Congressional support for enhanced US intelligence capabilities and targeted international cooperation programs is also a wise investment in US national security.

### ***Industry Must Be Part of the Solution***

The Study Group recommends that industry and government enter into a meaningful and ongoing dialogue on how to make existing and reformed controls, both national and multilateral, truly effective. To establish a more effective, two-way consultative relationship, the Study Group recommends that the president create a senior-level Industry Advisory Group (IAG) that would provide advice and input to the Deputies Committee on an ongoing basis. The IAG could provide valuable insights regarding the broader impact of specific policies and processes on US industry and US economic competitiveness.

The time for action is now. A convergence of interests—between both political parties, government and industry, and the United States and its key allies and friends—has created a new, and perhaps fleeting, opportunity for US leadership and presidential action. The Study Group believes that the strategy outlined herein for a new, more effective multilateral export control framework would enhance US national security. The Study Group urges immediate steps to advance its implementation.



# **Study Group on Enhancing Multilateral Export Controls For US National Security**

## **FINAL REPORT**

### **Introduction**

The system for controlling the export of militarily sensitive goods and technologies is increasingly at odds with a world characterized by rapid technological innovation, the globalization of business, and the internationalization of the industrial base, including that of defense companies. Although efforts have been made to adapt Cold War processes and regulations to changed circumstances, the current approach to controlling militarily relevant trade has failed to keep pace with changing international conditions and therefore falls short of adequately protecting US national security interests.

Robust controls on critical, sensitive technologies—both military and dual-use—remain vital to US national security. The United States has a strong national interest in strengthening the regimes that regulate trade in goods and technologies that could be used to develop or produce nuclear, chemical, or biological weapons, or the means to deliver them. The flow of advanced conventional weapons and certain dual-use technologies also potentially threatens US interests in many regions of the world, could limit American freedom of action, or inflict harm on US forward-deployed forces.

In a globalized economy, munitions and dual-use controls are more apt to be effective if they are agreed to in a multilateral context. While the international nonproliferation regimes governing weapons of mass destruction (WMD)—the Nuclear Suppliers' Group (NSG) and Australia Group—and missile technology—the Missile Technology Control Regime (MTCR)—generally are believed to help stem the spread of nuclear, chemical, and biological weapons and their delivery capabilities, the Wassenaar Arrangement on Conventional Arms and Dual-Use Goods and Technologies is perceived, particularly but not only in the United States, as weak and relatively ineffective in controlling the transfer of sensitive technologies to countries and regions of concern.

Reflecting growing concern with the impact of the current multilateral export control system on US national security, the Congress in October 1999 called for the creation of a Study

Group to “develop the framework for a new and more effective, COCOM-like agreement that would regulate certain militarily useful goods and technologies on a multilateral basis.”<sup>1</sup> This report represents the consensus findings of the resultant Study Group on Enhancing Multilateral Export Controls for US National Security.<sup>2</sup> The report is organized into three sections. Part I lays out the need and rationale for reform; Part II outlines a framework and comprehensive strategy with recommendations to enhance the effectiveness of multilateral export controls and facilitate defense cooperation with allies; and Part III concludes with the Study Group’s specific recommendations for near-term actions.

## **Part I: Reform of the Export Control System is Vital to US National Security in the 21<sup>st</sup> Century**

The current multilateral export control system consists of discretionary national export controls and multilateral agreements and arrangements governing trade in goods and technologies that can be used to develop conventional or mass destruction weapons and advanced commercial products. Although the regulatory processes governing munitions and dual-use items and technologies generally are separate, in practice the strict distinction has become more difficult to maintain. The increasing integration of commercial, dual-use technologies in military systems, for instance, poses particular challenges to existing national regulatory systems and multilateral frameworks. Thus, a more effective framework for export controls must be designed to address, in conjunction, both munitions and dual-use export concerns.

Further, while export controls continue to be vital tools of US national security policy, they must be adapted to the global economic, strategic, and political realities of the 21<sup>st</sup> century if they are to be more effective in protecting US national security interests. In assessing alternative multilateral export control frameworks, the Study Group therefore considered the implications of broader global trends, including the worldwide integration of economies and the changing threat environment, on the operational effectiveness of current arrangements, as well as the potential impact of political trends and developments on future reform efforts.

### ***The Changing Global Context of Export Controls***

The Study Group identified three factors that have significant implications for effective multilateral export control reform: (i) the impact of globalization;<sup>3</sup> (ii) the emergence of diverse threat perceptions; and, most importantly, (iii) the changing nature of US national security needs and requirements in the 21<sup>st</sup> century.

#### ***Globalization***

Whether measured in cross-border flows of goods and capital, foreign investment, international communications, or the number of Internet hosts and online users, ideas, people, and economies are becoming increasingly integrated worldwide.<sup>4</sup> Although state boundaries continue to define the limits of governmental authority and often cultural ties and social allegiances, they have become far less relevant to the economic behavior that underpins and fuels the prosperity of societies and nations. Economic activities that were once geographically localized are now dispersed across countries and continents. Whether for good or ill, these trends are pervasive and irreversible. As the Defense Science Board Task Force on Globalization and Security concluded, “globalization is not a policy option, but a fact to which policymakers must adapt.”<sup>5</sup>

The globalization of defense and commercial production activities has made advanced military capabilities and militarily relevant commercial goods and technologies more widely available to many countries or subnational groups, narrowing the technology gap between the United States and other nations. The global conventional arms market also has become more competitive as a consequence of declining procurement budgets, creating strong economic and industrial incentives for increased export sales. In this “buyers market,” states with sufficient resources can and will continue to acquire advanced conventional weapons systems with state-of-the-art electronics, sensors, and munitions. If a cheaper alternative is needed, upgrades to existing equipment or “hybridization” can be used to enhance a state’s military capabilities. Additionally, commercial technologies, integral to many advanced weapons systems and “enabling” technologies (such as advanced machine tools and high-performance computers), are spreading more rapidly as traditional global barriers to trade are reduced.<sup>6</sup>

Globalization has also transformed the defense industrial base upon which the US military relies. In the decade since the end of the Cold War, US defense industries have

undergone fundamental changes, becoming more streamlined, commercially oriented, and international.<sup>7</sup> Consolidation and diversification have pared significantly the number of US and allied defense contractors; those that remain are more reliant on the use of commercial-off-the-shelf (COTS) components, subsystems, and services and look to international export sales to help fund the research and development costs essential to developing the next generation of advanced weapons that are critical to preserving US military superiority. US firms also are becoming more international through foreign direct investment, mergers, acquisitions, joint ventures, and strategic partnerships. For many complex weapons systems, the production of components and, increasingly, of subsystems is spread across many allied countries, while joint ventures are becoming more common for production of major subsystems. Controlled sharing of technology, thus, can play an important role in ensuring the continued vitality and competitiveness of US defense industries.

The global integration of economies poses significant challenges for the effective control of trade in militarily relevant goods and technologies—both munitions and dual-use items. The multiplying number of potential suppliers and end-users of militarily relevant goods makes multilateral export control regimes harder to manage and maintain.<sup>8</sup> Further, while national controls on munitions are necessary to preserve US military and foreign policy options, they can also complicate the careful sharing of technology that is important to the maintenance of a competitive and efficient defense industrial base. Export controls are also affected by the growing importance of increasingly sophisticated, commercially developed technologies in advanced weapons systems. The pace of innovation in commercial technologies now involves product cycles measured in months rather than years, placing heavy demands on national and multilateral export control systems to ensure that control lists are updated.<sup>9</sup> Globalization, in short, places a premium on coordination, flexibility, and dynamism, key characteristics that the current regimes often lack.

Any effort to reform multilateral export controls, the Study Group concluded, must be consistent with the protection of US national security and with these profound economic and technological changes. Reforms also must address, in a comprehensive manner, both munitions and dual-use goods and technologies. Although recent initiatives to enhance US export controls are useful, additional changes are necessary to adapt to the fundamental structural changes that have accompanied economic globalization. Reforms also should be informed by an



understanding of the equally profound changes in the international political situation since the end of the Cold War.

### *Changing and Diverse Threat Perceptions*

Although the United States and its allies share many interests and concerns, at present, there is no agreement on a single, principal threat to our common security. Ten years after the collapse of the Soviet Union, the United States and its allies face a diverse array of dangers and uncertainties, which has led to varying national threat assessments, asymmetric vulnerabilities, and, on occasion, divergent foreign policy objectives and interests.<sup>10</sup> These different perspectives, in turn, have complicated efforts to forge a common policy regarding transfers of sensitive technologies, whether for munitions or dual-use goods and technologies, similar to that found under the Coordinating Committee on Multilateral Export Controls (COCOM).

With regard to technology transfers, the United States, its allies, and friends are united most on the need to maintain strong nonproliferation export controls. The spread of weapons of mass destruction and their delivery capabilities, both conventional and unconventional, poses a grave threat to the United States, its forward deployed forces, and US allies and friends. US national intelligence assessments warn that the number of states with the ability to threaten the United States with strategic WMD will increase over the coming decades and will include Russia, the People's Republic of China (PRC), North Korea, probably Iran, and possibly Iraq.<sup>11</sup> Similarly, the threat from longer-range ballistic missile capabilities is also expected to rise, as is the number of states or non-state actors capable of delivering WMD through unconventional means.<sup>12</sup> The technologies and ingredients to conduct biological and chemical warfare are less sophisticated than those for nuclear weapons or missiles and much more widely available.<sup>13</sup>

In addition to proliferation, the United States and its allies and friends confront other risks to national security. Regional sources of conflict and instability continue to affect US interests and those of our allies in many parts of the world; nevertheless the policy of the United States and other countries regarding munitions and dual-use transfers to specific countries or regions may vary. Further, hostile states and subnational groups could seek to exploit weaknesses and vulnerabilities at home and abroad through "asymmetric" means.<sup>14</sup> For example, international terrorists, weapons proliferators, or transnational organized crime networks could engage in attacks on citizens, facilities, or critical domestic infrastructures (i.e.,

energy, communications, transportation, and financial networks) or traffic in nuclear, chemical, and biological weapons, aided by the worldwide diffusion of modern information and communications technologies.<sup>15</sup> Such attacks could involve clandestinely acquired munitions but might also employ commercial goods and technologies that are available worldwide. Although many countries face “asymmetric” threats, the United States is considered particularly vulnerable because of its global role and interests.

The disparate array of security risks and challenges facing the United States and its allies can complicate coordination of national export control policies and approaches. This is particularly true with regard to certain “gray-area” states, whose internal development, capabilities, and intentions toward other nations remain uncertain and therefore much disputed. While there is general agreement on the most troublesome countries today (e.g., North Korea, Iraq, and Libya), the United States, its allies, friends, and other countries often differ over the implications of trade with states that might evolve in a benign or threatening manner, depending on the confluence of domestic and international factors. The difficulties associated with achieving a common position on export control policy are nowhere more evident than with regard to Russia and the People’s Republic of China.

Technology transfers both to and from Russia will remain a matter of concern for the foreseeable future because of uncertainties regarding Moscow’s present and future course and actions. The Russian government’s commitment to democratic principles and processes remains indeterminate, while chronic economic problems, rampant corruption, and organized crime show few signs of abating. Although Russia’s defense resources are much reduced compared to Soviet-era capabilities (as reflected in the declining state of its once powerful conventional forces), Moscow retains ambitions to play a significant international role. Fueled by strong economic motives, Russia has adopted a policy of liberal arms sales, with the People’s Republic of China and Iran among its most controversial customers. The United States and the North Atlantic Treaty Organization (NATO) continue to engage Russia through the NATO–Russia Permanent Joint Council, Partnership for Peace, and other collaborative programs. The political relationship between Russia and the Western democracies nevertheless remains troubled, and concern about Russian export behavior is deepening.

The PRC’s future course and commitment to nonproliferation and export control norms are similarly disputed. In the United States, political leaders, foreign policy analysts, and

government officials view political, economic, and military trends in the People's Republic of China with growing wariness and its willingness to abide by nonproliferation commitments with skepticism. As a result, at present there is no consensus on the PRC's capabilities and intentions nor on US-China policy.<sup>16</sup> While the debate over China policy has continued in the United States, European states as well as the European Union have moved quietly, but steadily, to deepen their political and economic ties to the PRC. Though aware of the PRC's rising power, many European countries do not perceive China as a significant threat and see little alternative to engagement in order to minimize any risks associated with Beijing's emergence as a global player.<sup>17</sup> These different perspectives are related, in part, to the fact that the United States and Europe have different interests with regard to China and East Asia. Unlike Europe, the United States is a global power, with important alliance relationships and international commitments in the Pacific region. In contrast, while the European Union (EU) is global player, political divisions among its members can prevent the European Union from playing an equally influential political role outside of Europe, including in Asia. These different perspectives on the PRC, as well as divergent transatlantic interests, could hinder efforts to forge a common US-allied approach on the issue of technology transfer to the People's Republic of China.<sup>18</sup>

Even where US and allied interests and objectives coincide, agreement on a common approach to trade and technology transfers can be difficult to achieve and maintain. For example, although there is solid consensus on the need for strong WMD-nonproliferation controls, the United States and allied countries sometimes respond differently to individual states suspected of harboring ambitions to acquire or enhance WMD capabilities. The current disputes over sanctions against Iraq or trade with Iran demonstrate aptly the transient nature of multilateral consensus on the current export control system.

The complex threat environment that has emerged from the end of the Cold War has important implications for effective regulation of trade in militarily relevant goods and technologies. As a global power with wide-ranging economic, political, and strategic interests, the United States is vulnerable to diverse risks and dangers. Whether the problem is WMD proliferation, regional instability and aggression, or asymmetric attacks, transfers of militarily relevant technologies can heighten the risks to American interests and lives. In contrast, countries that are less vulnerable to these risks or have dissimilar national interests might assign a lower priority to export controls or assess the risks associated with technology transfers differently. This is especially true for conventional arms sales and dual-use exports to many countries. Under these circumstances, agreement on the objectives, targets, and scope of export

controls as well as the institutions, policies, and regulations necessary to check the spread of certain technologies has grown increasingly difficult to achieve and to sustain. Consequently, incentives along with strong and creative diplomacy are likely to be needed in order to realign disparate interests and achieve effective harmonization of approaches to the control of sensitive technologies.

### *US National Security Interests in the 21<sup>st</sup> Century*

Effective tools for preventing the proliferation of weapons of mass destruction and stemming the diffusion of advanced military capabilities are essential to the protection of US national security and maintenance of the United States' role and leadership in the world. Indeed, since the end of the Cold War, successive US administrations and Congressional leaders have identified measures to prevent and counter the spread of WMD as a leading priority in US national security policy.<sup>19</sup> Further, retaining a conventional military edge against potential adversaries is vital to the protection of US interests abroad and to the fulfillment of American security commitments to allies and friends.

In addition, the Study Group recognizes that the United States has a vital national security interest in maintaining strong, competitive, and efficient defense industries. The effects of globalization on the US defense industrial base, as noted above, creates the need to share defense-related technology, an objective that can be difficult to achieve in light of different national export control systems and an often lengthy US licensing process.<sup>20</sup>

Finally, the Study Group notes that US national security interests will be enhanced by the ability of US military forces to undertake military operations and conduct joint warfare with allies in order to counter the diverse security challenges of the post-Cold War world.<sup>21</sup> As the Gulf War and Kosovo operation demonstrated, however, a technological divide exists between the United States and its allies, which can undermine the ability to conduct effective coalition operations. The technology gap between US and allied forces is related, in part, to declining European defense budgets and insufficient investments in the defense capabilities needed to fulfill new alliance tasks.<sup>22</sup> Yet, fulfillment of alliance objectives and preservation and enhancement of alliance interoperability will depend increasingly on the sustained and reliable sharing of state-of-the-art weapons systems and the dual-use technologies that have become vital to modern military operations, as well as the possible involvement of allies and friends in the

development and production of these systems—both of which will require modifications to the current system of munitions export controls.<sup>23</sup>

US national security interests thus could benefit from additional adjustments in the current system of controls on militarily sensitive technologies.<sup>24</sup> Specifically, US interests in strong nonproliferation and export control regimes, an efficient and competitive defense industrial base, and alliance interoperability call for a differentiated approach to restraints on technology transfers that includes effective controls on fewer, sensitive military goods and technologies and that facilitates defense cooperation with close allies and friends.<sup>25</sup>

### ***Current Multilateral Export Control Mechanisms: The Need for Change and US Leadership***

The Study Group recognizes that any realistic program to reform the current system of multilateral export controls must take into account existing regimes, as well as the perspectives and past experience of potential partners in the reform effort. In particular, the Study Group acknowledges that there is value in the Wassenaar Arrangement, as well as a need for improvement. The Study Group believes, however, that more effective multilateral export controls will only be achieved if the United States and allies and friends are willing to conclude mutually beneficial, supplementary understandings, a goal that, in turn, will necessitate further reforms of the US export control system, particularly with regard to munitions. Recent initiatives to address shortfalls in resources and licensing personnel in the United States, as well as the Defense Trade Security Initiative (DTSI), are positive steps in this regard. The Study Group nevertheless concludes that additional reforms of the multilateral as well as US and allied domestic export control systems are necessary to adapt the existing systems to the far-reaching changes associated with globalization and the end of the Cold War.

### ***Perspectives on the Past***

COCOM reflected the strategic, economic, and technological realities of its time.<sup>26</sup> Created in 1949, the original arrangement comprised the United States and 16 other allied nations, who were united by a common sense of purpose and a shared perception of the overriding threat to their national security and interests. The targets of the regime were explicitly stated: the Soviet Union, the allied nations of the Warsaw Pact Treaty Organization, and,

eventually, the People's Republic of China. Like its successor, COCOM was not based on an international treaty, but rather constituted an informal arrangement among like-minded states. From the US perspective, it nevertheless functioned rather effectively for over four decades, due to the strong nature of its consensual underpinnings and a robust regulatory regime. For example, exceptions to the embargo on controlled items required the unanimous approval of all members, a provision that, in effect, constituted a veto by other states on the national discretion of other members.

COCOM also encountered difficulties, however, which reflected transatlantic differences in policy and procedures that existed then as now. Some disputes indicated conflicting interpretations of the regime's licensing requirements. Under the COCOM regulatory regime, for example, "national discretion" exemptions to licensing were allowed for items falling below a defined level of technical sophistication. For exports of goods of a "borderline" nature, members often chose to exercise the national discretion option, a practice that the exporting nation regarded as legitimate, but that others could dispute based on a conflicting interpretation of the level of sophistication. In other cases, divergent political perspectives contributed to disputes. Thus, participation in COCOM did not eliminate US-European differences over policy on technology transfers to the Soviet Union and its allies, as the heated transatlantic dispute over the export of gas pipeline products and technologies to the Soviet Union in the early 1980s demonstrated. Finally, over time, some allies came to resent COCOM's national veto on exports of other participating states, which many perceived as an infringement on national sovereignty that set unacceptable limits on the latitude of an increasingly confident Europe.

Although US observers believe that COCOM was reasonably effective, many allies evaluate their experience with this Cold War arrangement differently. European allies and partner states consequently are wary of endorsing proposals that appear, in their view, to signal a resurrection of past methods and principles. Reform initiatives should take into account, therefore, allied ambivalence about past regimes, as well as the perspectives of US partners regarding COCOM's successor, the Wassenaar Arrangement.

### ***Wassenaar: A System in Need of Reform***

Intended by its creators as a complement to existing regimes for WMD and missile technology, the Wassenaar Arrangement was established in 1996. The new regime was expected

to enhance transparency and encourage responsible behavior regarding the transfers of conventional arms and dual-use goods and technologies in order to prevent “destabilizing accumulations” of arms that could threaten regional and international stability and security. Given the diversity of perspectives on the purpose and importance of export controls that prevailed at the time of Wassenaar’s creation, the agreement to create a new export control regime was a significant accomplishment and testimony to US leadership. Membership in Wassenaar—now at 33 member states—is nondiscriminatory, open to any state that produces or exports arms or defense industrial equipment, and that meet certain criteria. Admission to the regime is decided on the basis of consensus among current members, and aspirants are expected to adhere to recognized international nonproliferation standards and norms, as well as to maintain “fully effective export controls.” Importantly, the founding members agreed that the Wassenaar Arrangement cannot be targeted explicitly at any particular state or group of states.<sup>27</sup>

In practice, however, the operation of the Wassenaar Arrangement often falls short of expectations, reflecting political fractures within the regime as well as structural and procedural deficiencies. First, Wassenaar deals with a complex and often disputed area of technology transfer—conventional arms and dual-use exports—about which the international consensus governing legitimate or “destabilizing” transfers is weak and fractured. Where there is solid agreement among states (i.e., with regard to the behavior of “pariah” states), the implementation of Wassenaar’s provisions has been fairly uniform and effective. Beyond a narrow range of core concerns, however, Wassenaar’s large and diverse membership hinders harmonization of policy. For example, the right of states to acquire the means for self-defense, codified in Article 51 of the United Nations Charter, is subject to various interpretations that make agreement on conventional arms sales difficult.<sup>28</sup> Perspectives also diverge on the impact of dual-use exports on regional stability and security, depending on particular member states’ objectives, interests, and political relations with potential recipient states.

Second, structural and procedural deficits weaken the Wassenaar Arrangement. Required reports on transfers are sometimes incomplete or insufficiently focused, undermining the value of the information exchanges that are intended to facilitate harmonization of member states’ policies and to provide transparency and early warning of troubling trends in conventional arms transfers.<sup>29</sup> Progress toward structural and procedural reforms has been slowed by the diversity of Wassenaar’s members, as seen most recently at the December 2000 plenary, where consensus on a number of proposed changes, including the adoption of “catch-all provisions,” further

modifications to the General Information Exchange, and measures to restrict “undercutting” of denials by other members, could not be achieved.<sup>30</sup>

Third, the Wassenaar Arrangement has suffered from insufficient high-level political support and resources. The multiplicity of specialized nonproliferation and export control regimes imposes costly burdens on all member states, due to budgetary limitations and an insufficient number of qualified personnel to devote to export control management. Some governments consequently assign a lower priority to the control of conventional and dual-use items than to other WMD-related fora, since the impact of such controls on proliferation is often less clear. The lack of consistent senior-level official representation at Wassenaar by the United States and others also has contributed to Wassenaar’s overshadowing by other regimes.

Finally, the Wassenaar Arrangement’s controls are based on national discretion. Although the same principle applies to the multilateral WMD regimes, its application in the Wassenaar Arrangement is particularly problematic, given the weak consensus governing transfers of conventional arms and dual-use goods to many countries and regions of concern. In the final analysis, the principle of national discretion, as applied in Wassenaar, more often results in varied approaches, interpretations, and enforcement of agreed rules, thereby weakening the regime’s overall effectiveness.

The Wassenaar Arrangement is broadly viewed in the United States as weak and, for the most part, ineffective. Some US allies and friends, however, continue to see potential in the regime. In this view, the Wassenaar Arrangement provides useful minimum standards for responsible export behavior and a foundation for strengthened international cooperation to prevent dangerous military build-ups. The Study Group believes that these perspectives are important to consider, since experience with both past and current regimes will influence the response of allies and friends to new reform initiatives.<sup>31</sup>

Some US allies view the Wassenaar Arrangement as comparatively young and undeveloped, but not without promise. They view the Wassenaar regime, in contrast to COCOM, as nondiscriminatory and inclusive, attributes that some partner nations believe will encourage more states to adopt responsible export control policies and procedures. Further, although Wassenaar’s guidelines for information exchanges and control lists remain non-binding, the regime is believed to establish minimum standards for technology transfer and thus



provide a baseline that, in theory, could be raised over time. Achieving consensus among 33 members is time-consuming and laborious, but defenders of Wassenaar point out that improvements to the initial guidelines have been achieved. Supporters of the regime point, for example, to decisions at the December 2000 plenary session to regulate and restrict exports and transfers of Man Portable Air-Defense Systems (MANPADS).<sup>32</sup>

In the view of the Study Group, these divergent perspectives, born of past and present experiences both with COCOM and Wassenaar, constitute significant, but not insurmountable, obstacles to reform of the multilateral export control system. Near-term initiatives to improve the operational effectiveness of the Wassenaar Arrangement would address the desire of allies and friends to build upon the existing regimes, but could be limited by the political and structural deficiencies noted above. Supplementary initiatives among those states willing to undertake additional export control commitments and incentives based on shared interests, will also be necessary. Finally, the Study Group believes that the prospects for successful multilateral reform will be strengthened by continued progress toward addressing shortcomings of the US export control system.

### ***The Need for Domestic Reform***

Although Wassenaar is a source of much concern, the Study Group notes that problems with the US export control system reduce the credibility of US efforts to win the support of allies and friends for strengthened multilateral export controls. Complaints seem more often directed at the US system of munitions export controls, but US perspectives on dual-use controls have also come under fire.

The US export control system is widely perceived as unnecessarily complex and viewed by some as unpredictable, unresponsive, and insufficiently transparent. Frustration with the intricacies of the US export control system and, particularly in the case of munitions, the lengthy approval process, is building, in some instances to the point that some foreign businesses have declared their intention to seek alternatives to American suppliers so as to avoid the problems they perceive as associated with US munitions controls.<sup>33</sup> Rightly or wrongly, the perception has taken hold that the US export control system, especially munitions licensing, impedes effective collaboration, discouraging some foreign or domestic companies from undertaking critical international cooperative ventures.<sup>34</sup> Unless mutual confidence can be restored and

harmonization achieved, the United States and its allies, particularly in Europe, could drift in a direction that neither wants to go—toward the creation of independent and redundant defense production capabilities. A situation characterized by the existence of a “Fortress Europe” and a “Fortress USA” is in the interest of neither the United States nor its European allies.

Disparities between US and allied policies and practices governing the export of both munitions and dual-use items further impede the defense cooperation that is vital to US national security. While institutional and procedural differences in national export control systems are understandable in light of disparate traditions, political systems, and legal requirements, the absence of common standards of performance undermines mutual confidence in defense partners’ regimes, a problem that, in the case of munitions, the DTSI has attempted to address. While the US export control system is arguably more complex than the control systems of many nations, insufficient information about the procedures and mechanisms employed by other countries also impedes evaluation of the relative effectiveness of different national systems.<sup>35</sup> US allies and friends argue that their export control systems are effective, although they do not necessarily mirror precisely US policies and procedures. The United States, for its part, understandably needs assurances that the systems for implementing and enforcing export controls in other nations are robust and effective before it can allow a transfer of US-origin goods and technologies to go forward.<sup>36</sup> Beyond disparate procedures, the lack of comparable policies creates problems as well. The re-transfer of US products or of foreign manufactures containing US products to third parties has proven to be a particularly rancorous issue because of differences between the United States and other nations over sales to certain countries or end-users and the extraterritorial application of US controls.

Fundamentally, the Study Group believes that US allies and friends should be treated—and treat one another—differently than countries of concern and, moreover, should be bound by different standards of behavior. The situation could be improved through US reform, particularly in the area of munitions controls, but if harmonization is to be achieved, allies and friends also will need to “control up” in a way that ensures US confidence in their export control review process, authorization, tracking, and enforcement systems as well. Further, the blurring line between military and dual-use items makes it imperative that differences over dual-use controls be resolved in tandem with reforms in the munitions sector. Both the United States and its close allies and friends could reap significant security benefits from a system that facilitates, rather than impedes, the technological exchanges vital to effective defense cooperation and

continued innovation and that provides incentives for states to forge a common approach on export controls. Greater harmonization also would eliminate the undercutting that is inevitable when national policies diverge and some states apply more liberal controls, to the detriment of others' economic and security interests and of multilateral cooperation more generally.

### ***The Time is Ripe for Reform***

While the changed global context and US national security interests create a compelling need for reform, developments in the United States and Europe have created a unique, and perhaps fleeting window of opportunity to achieve a more effective multilateral system of export controls.

In the United States, awareness of the need for change in the current multilateral export control system is growing, although the prescriptions for reform may vary. The *Report of the Select Committee on US National Security and Military/Commercial Concerns with the People's Republic of China* (the "Cox Committee Report"), for example, noted the "insufficiency" of the Wassenaar Arrangement and recommended that the United States "work in the context of the scheduled 1999 review of the Wassenaar Arrangement, to establish new binding international controls on technology transfer that threaten international peace and US national security."<sup>37</sup> The challenges associated with achieving effective multilateral and national technology controls in the new strategic and economic environment also were illuminated in the 1999 report of the Defense Science Board on the impact of globalization on the US defense industrial base and global military dominance. The report observed that current multilateral controls are no longer a "significant factor affecting access to highly sophisticated dual-use technology and they have been only marginally successful in the conventional weapons arena."<sup>38</sup> The report cautioned that the utility of export controls as a tool to maintain military superiority will diminish "as the number of US-controllable militarily useful technologies shrinks."<sup>39</sup>

Concerns about the shortcomings of the existing system of US regulations and controls on dual-use and munitions items are also growing. Export controls now top the list of concerns of numerous industry associations, and individual companies expend considerable time and effort navigating existing regulations and lobbying for changes they believe are warranted in light of trends in global trade and production.<sup>40</sup> In summer 2000, for example, 27 Members of the California Congressional Delegation wrote to then-Secretary of State Madeleine Albright,

urging her to streamline the Department of State's review of applications for exports of commercial satellites and their components to allies and friends that pose no obvious threat to the United States.<sup>41</sup> In March 2001, the US Senate Committee on Banking, Housing, and Urban Affairs approved by an overwhelming majority legislation to authorize a reformed and updated Export Administration Act.<sup>42</sup> The growing awareness of the need for change is reflected, not least, in the October 1999 mandate for this Study Group.

Significant political and economic developments in Europe over the past 18 months provide an additional spur to act sooner rather than later. In June 2000, the European Union updated and revised its system of dual-use controls to enhance harmonization of licensing procedures and address a number of problems and deficiencies in the pre-existing system.<sup>43</sup> Under the EU system, the member states require a Community General License for most dual-use exports (including software and technology) to allied and friendly countries. In contrast, more than two-thirds of these items no longer require special authorization for intra-Community transfers and exports. In addition, the EU has taken steps to improve the operation of its "catch-all" policy, requiring exporters to apply for a license even for non-listed dual-use items, if they have been notified that the item in question is or might be intended for military end-use. Finally, the Commission also has introduced a "no-undercut" provision intended to ensure that exporters in other member states do not grant licenses for "an essentially identical transaction within the previous three years."

Important steps also have been taken to harmonize munitions export control procedures and regulations within the EU and to facilitate defense industrial consolidation and cooperation.<sup>44</sup> In 1998, the EU Council agreed on a common Code of Conduct on Conventional Arms Exports, which provides general guidelines for exporters in the EU member states. Though inter-governmental in nature and thus non-binding, the Code includes notification requirements and consultation requirements for denials of transfers.<sup>45</sup> In a separate initiative, the six leading defense producers in Europe—France, Germany, Italy, Spain, Sweden, and the United Kingdom—on 27 July 2000 signed a Framework Agreement aimed at facilitating European defense restructuring and cooperation.<sup>46</sup> The agreement includes provisions intended to "bring closer, simplify and reduce, where appropriate, national export control procedures for Transfers and Exports of military goods and technologies" among signatories to the agreement.<sup>47</sup>

Although the member states of the European Union continue to maintain different national export control policies, the EU members have developed a common framework for both

munitions and dual-use transfers, which over time could contribute to the closer alignment of export control policies. The desire to enhance defense industrial cooperation, in particular, is likely to constitute a powerful driving force for further harmonization. For the United States, the progressive “Europeanization” of export control policy presents both a challenge and a potential foundation for future transatlantic coordination.

Finally, the change in US leadership and need for bipartisan cooperation could create a unique opportunity for export control reform efforts. Concerns over the damage to US national security from the flow of militarily relevant technologies and products to potential adversaries are not a partisan issue. The Clinton administration’s Defense Trade Security Initiative was intended to facilitate defense cooperation with allied nations by addressing munitions export control impediments to allied interoperability. President George W. Bush recognized the need for reform of both munitions and dual-use controls during his campaign, when he pledged to “fix the export control system by developing a tough-minded, common sense export control policy.” President Bush pointed, in particular, to the need to “revitalize multilateral cooperation to control the proliferation of the most critical technologies.”<sup>48</sup>

Thus, the Study Group believes that the need for change is urgent, the time for action at hand. The current system of controls already lags behind emerging global economic and technological realities. If the current situation is left unchanged, the potential threats to US security and economic interests will grow worse. Over time, the number of suppliers of sensitive dual-use goods and military exports will continue to increase, magnifying the problems of coordination that currently weaken the Wassenaar Arrangement. If the deficiencies of the current system are not addressed, the United States defense industrial capacity could be damaged and our ability to undertake joint operations eroded, thereby posing significant challenges for the alliances and defense partnerships that are vital to the security of the United States and its forces abroad. Finally, the United States could also deny itself important external sources of technological innovation that are critical to the competitiveness of the US military and to the vitality and health of the US defense industry and the US economy more generally.

## **Part II: A Proposed Comprehensive Approach to Multilateral Export Control Reform**

A new multilateral export control framework for US national security would have two objectives:

- Enhancing the effectiveness of multilateral export controls on technologies deemed the most critical; and
- Facilitating defense cooperation with US allies.

To achieve these objectives, the Study Group recommends the following three steps toward establishing a new, more effective overall framework for multilateral export controls:

- **Recommendation 1:** Over the short-run, maintain and improve the Wassenaar Arrangement and other multilateral arrangements; over the medium- to long-term, seek to merge the existing multilateral regimes into a single, maximally effective body, beginning with those focused on preventing WMD proliferation.
- **Recommendation 2:** In the interim, work to establish a new supplemental framework for coordinating multilateral export controls based on harmonized export control policies and enhanced defense cooperation with close allies and friends.
- **Recommendation 3:** Seek simultaneous reforms of the US export control process.

The rationale and details behind each recommendation are provided below.

***RECOMMENDATION 1: Over the short-run, maintain and improve the Wassenaar Arrangement and other multilateral arrangements; over the medium- to long-term, seek to merge the existing multilateral regimes into a single, maximally effective body, beginning with those focused on preventing WMD proliferation.***

In assessing the means for achieving more effective multilateral export controls, the Study Group concluded that a new, more effective framework would best be achieved as a

practical matter by supplementing—not replacing—existing control regimes. In reaching this conclusion, the Study Group also determined that existing regimes, particularly the Wassenaar Arrangement, would benefit from internal reforms. Since Wassenaar is, in the perception of the United States and that of other states, the weakest of the current multilateral regimes, but also the most applicable for the purposes of this Study Group, most of the Group’s recommendations pertain to reforms of this regime in particular.

### ***Short-Term Improvements to Multilateral Export Controls***

Several steps can be taken in the short-term to improve the internal workings of the Wassenaar Arrangement. Areas of needed reform include more robust information exchanges, procedural reforms, and an enhanced role for Wassenaar’s Secretariat. Additionally, the Wassenaar Arrangement is an appropriate multilateral framework for US and allied efforts to secure Russian compliance with global export control standards and norms.

A primary function of the Wassenaar Arrangement is the facilitation of information exchanges on arms transfers and on sensitive dual-use goods and technologies. The Study Group believes that this function is essential and therefore supports improvements in the efficiency and effectiveness of Wassenaar’s General Information Exchange process.<sup>49</sup> Specifically, the Study Group recommends that the United States continue to work with other State Parties to Wassenaar to achieve more detailed reporting on a broader range of controlled items, expanded information sharing on suspect end-users and technology-acquisition methods of a larger set of countries, and to complete implementation of a real-time, computerized information management system to allow more efficient, timely, and secure data sharing. To succeed, these efforts will require high-level representation, sustained commitment, and priority attention by the United States government and other members.

Another specific area for expansion, originally proposed by the United Kingdom, is information exchanges focused on specific regions of conflict. The Study Group believes this approach merits further exploration to determine its feasibility and potential for providing a “situational focus” for members. Whether through a formal mechanism or less structured means, information exchanges with a regional focus in Wassenaar could help to alert the international community to potential instability due to arms-related transfers in a timely fashion and provide

the necessary security context for coordinated action without violating Wassenaar's maxim against targeting the activities of any specific country.

In addition, it is essential that members of the Wassenaar Arrangement take steps to reform other internal procedures of the Arrangement to improve the regime's overall effectiveness. The most important measures that members can pursue are mandatory reports of munitions license denials, a catch-all provision, and a stronger "no-undercut" rule similar to the provisions found in the other nonproliferation regimes.<sup>50</sup> The Study Group supports ongoing efforts to reduce the incidence of national export behavior that can weaken the Wassenaar regime and harm other member states' interests. Furthermore, members of the regime should be encouraged to establish working groups or other means of continuously reviewing and assessing controls over specific classes of technology. Finally, Wassenaar members should be encouraged to accelerate efforts to develop common licensing standards, which the Study Group views as fundamental to achieving greater effectiveness of multilateral export controls.

Steps also should be taken to realize the potential of the Wassenaar Arrangement's Secretariat, which has not been utilized to its full advantage. Unlike the other nonproliferation regimes—the NSG, the Australia Group, and the MTCR that must rely on the diplomatic missions of Japan, Australia, and France, respectively—the Wassenaar Secretariat has a permanent office located in Vienna, a chairperson, and a comparatively sizeable staff. The Study Group recommends that the United States work with other State Parties to the Arrangement to make greater use of this important asset in coordinating, standardizing, and furthering the regime's work.

Finally, the Study Group recommends that US leaders make responsible export behavior on the part of Russia a high priority in US–Russian relations and encourage other allied nations to do likewise. As a member of Wassenaar, Russia has agreed to abide by the regime's standards and provisions, but Russia also continues to engage in what many view as questionable international transactions and is cited as a frequent obstacle to significant reforms within Wassenaar. This situation points to a central weakness in the regime, namely, the great diversity of members within Wassenaar's ranks, which, in principle, is a potential source of strength but, in practice, more often a debilitating weakness. It is, therefore, critically important that any possible violations of Wassenaar standards receive high-level attention by the US government and be addressed both in bilateral discussions with Russia and in the context of Wassenaar. Only



then can the Wassenaar Arrangement provide a useful benchmark for other states, including China, that seek international acceptance in the community of responsible states.

### ***Medium- to Long-Term Improvements to Existing Multilateral Export Control Regimes***

The Study Group recommends several steps toward a strengthened and more efficient multilateral export control system. The first step toward this goal is to create an Executive Council consisting of representatives from each of the existing multilateral export control regimes. This Council should immediately begin to find ways to improve coordination among the control regimes in terms of licensing, reporting, and enforcement standards.

The Study Group also recommends that, over the longer term, the Council examine the feasibility of merging some or all of the multilateral regimes into a single body. The Study Group acknowledges that previous administrations have considered, but then rejected, such a merger and therefore recommends that the consolidation of existing regimes should only be undertaken if certain problems can be satisfactorily resolved and if the result would enhance US national security interests. Among the difficult issues requiring further consideration are how to improve coordination given variations in regime objectives, levels of commitment to nonproliferation, membership, regulations, and enforcement practices. Nevertheless, the Study Group believes that the United States and other members of the multilateral regimes on the whole would benefit from merging the multilateral export control regimes under one umbrella.

A consolidated organization comprised of the current control regimes would have several advantages. For example, merging the regimes into a single body would allow greater coordination in achieving the common goals of nonproliferation and transparency, reduce overall administrative costs, limit redundancies in controls, and permit analysis of cumulative effects using cross-regime data and expertise. While acknowledging the formidable obstacles and potential pitfalls of a merger, the Study Group believes that the benefits inherent in a more comprehensive and coordinated approach could help to overcome the reservations of some member states. Again, however, a merger of existing regimes should be attempted only if the effect of the merger would raise, not lower, the bar for multilateral export controls.

Given the difficulties associated with consolidation, the actual merging of the regimes might best be achieved in two phases: merging the WMD regimes first, and incorporating a strengthened Wassenaar Arrangement into the new regime at a later time. Merging the principal WMD regimes—the Australia Group, the Nuclear Suppliers Group, and, assuming certain caveats, the MTCR—could have several immediate advantages. First, there is little doubt that nonproliferation objectives would be better served by a more comprehensive source of data and a cross-cutting assessment of proliferation activities. Second, a merger would eliminate the somewhat arbitrary divide of WMD into separate control regimes, despite the fact that states interested in developing WMD often seek to acquire multiple types of WMD from diverse sources. By establishing working groups comprised of representatives from each of the multilateral regimes and devoted to coordinating and reviewing controls of specific classes of weapons and technologies, the unique and detailed focus that these technologies require could be preserved under the proposed Executive Council structure but each sector also would benefit from a more coordinated process. Although the details of how the working groups would function should be left to State Parties to determine, provisions would have to be made to guarantee appropriate access to information for members of different regimes while restricting certain other information to states that are members of some but not all of the regimes. Nevertheless, because membership in the WMD regimes is largely coterminous and the regimes share the common goal of slowing the proliferation of WMD capabilities, regulatory differences among these regimes and other difficulties should not necessarily prevent their consolidation.

As noted above, special provisions would need to be made in order to merge the MTCR with other multilateral regimes, given its unique objectives and obligations.<sup>51</sup> However, if the WMD regimes can be consolidated without harming their overall effectiveness, additional steps could be taken to improve coordination between the new umbrella regime and the Wassenaar Arrangement. The integration of Wassenaar into an overarching umbrella regime would be a particularly difficult endeavor given Wassenaar's larger and more diverse membership, the lack of a clear consensus on controlling certain dual-use and conventional transfers, and the different regulatory and enforcement standards, not to mention fundamental differences among the parties based on foreign policy interests.

If effective solutions to these and other potential obstacles could be found, however, the Study Group believes that merging the regimes into a single body would result in a more comprehensive, and therefore stronger, multilateral export control system.

**RECOMMENDATION 2: *In the interim, work to establish a new supplemental framework for coordinating multilateral export controls based on harmonized export control policies and enhanced defense cooperation with close allies and friends.***

A new, supplemental framework for enhancing multilateral export controls to complement the Wassenaar Arrangement and other multilateral export control regimes must address the challenges presented by the new global security environment. Specifically, given the reality of an increasingly globalized industrial base and the need for greater allied force interoperability, the United States would benefit from not only identical, strict controls over the most critical export items, but also a more flexible export control system to meet rapidly changing technological and security interests. As a result, enhancing US national security will not always be achieved solely through ever-tighter constraints; in limited cases, US national security will be best served through a framework comprising less restrictive or fewer controls among a coalition of states willing to take on common external export control commitments implemented through binding domestic laws. This is the rationale that underlies the proposed supplemental framework. Because achieving consensus on such an approach under Wassenaar appears infeasible in light of the diversity of perspectives and export control practices represented in the Arrangement, a new multilateral regime of like-minded states is necessary.

The Study Group's proposed framework assumes that enhanced cooperation on multilateral export controls, above the commitments made by members of Wassenaar, is possible based on common values and interests as well as incentives to participating states. The purpose of the new framework, therefore, would be twofold: 1) to enhance common security by placing stricter, identical controls on the most sensitive technologies to end-users outside the framework; and 2) to reform export controls within the framework in order to facilitate defense cooperation with key US allies and friends. Specifically, the proposed supplemental framework is premised on the belief that the United States and its close allies and friends would be willing to enter into a supplemental multilateral export control arrangement and related commitments in exchange for the incentive of freer access to critical technologies for the purpose of increased defense cooperation. Intensified cooperation on munitions controls would provide the foundation for harmonization also of dual-use trade controls. The strategy for reform, criteria for membership, and long-term outlook for the proposed framework are outlined below.

***Establishing a Supplemental and More Effective Framework for Multilateral Export Controls: A Strategy for Reform***

The strategy for instituting the proposed supplemental framework would require both domestic and multilateral reforms to arms and dual-use export controls. Building upon common values and a shared interest in enhanced defense cooperation, the United States and its prospective partners would forge a consensus on technology transfers to allow freer access to technology within the framework and more effective controls over transfers of the most critical technologies to parties outside the framework. In other words, the goal of the proposed framework would be the oft-cited “higher walls around fewer items.” Although the framework would include both arms and dual-use controls, the premium on defense cooperation demands that immediate attention be given to reforming controls over munitions, with reforms of dual-use controls to be addressed progressively as the new cooperative arrangement develops.

The first step toward establishing the supplemental framework for enhanced multilateral export controls would be to engage key US allies and friends in a dialogue on harmonization of export control policies and potential defense cooperation to identify common interests and security concerns. The success of the proposed framework, however, will depend entirely on the partners’ ability to devise a common approach toward nations and/or end-users outside the framework. The tradeoff is clear: significant reductions in license requirements for technology transfers within the framework to facilitate defense cooperation will only be possible if the partners agree on, and effectively enforce, identical controls over critical technologies to third parties.

The next step would be for interested partners to develop a functional approach to export controls that would most effectively safeguard the technologies controlled outside the framework but shared among the members. One way that this might work is to develop a tiered list of the sensitive to most critical technologies that partners would trade with fewer restrictions among themselves but would agree not to transfer to third parties without export controls and, at times, the consent of the other partners.<sup>52</sup> Adoption of a tiered system also would be conducive to a phased approach to implementation of the new system so as to build confidence in the new framework before reducing license reviews for higher levels of technology shared among the parties. For example, a trial period for unrestricted trade of the lowest tier, or relatively least sensitive technologies, could be implemented; trade of more sensitive technologies would be liberalized only if all parties felt confident about the effectiveness of the new system.

A particularly sensitive issue that also would have to be addressed by the new framework concerns the treatment of “deemed exports” or intangible transfers, particularly as they pertain to defense production. “Deemed exports” refer to the transfer of technology or know-how to a foreign national, which is treated as an export to the home country of that person and therefore requires a license if the technology is controlled. The globalization of the defense industrial base, noted above, makes it likely that “national teams” engaged in the production of particular defense items will increasingly comprise multiple nationalities. Resolution of this issue will depend on the willingness of countries participating in the supplemental framework to accept a measure of reciprocity, at least as it pertains to “deemed exports” of unclassified goods and technologies.<sup>53</sup>

Another essential element and important confidence-building measure would be concomitant efforts by the United States and its partners to reform domestic export controls. A fundamental review of the objectives and regulations governing the US arms export control system is imperative if the proposed framework is to succeed (see Recommendation 3 below). In addition, these efforts would demonstrate to prospective partners the seriousness and commitment that the United States affords this new, supplemental regime. At the same time, the United States would seek demonstrations of similarly high-level support and commitment from prospective partners, including (but not limited to) allied efforts to harmonize their policies, processes, and enforcement practices with those of the United States and other partners. Given the very sensitive technologies that the supplemental framework could allow to be shared among the parties without extensive license review, but that must not be transferred beyond framework members, a high degree of trust must be developed among the parties. A jointly agreed-upon monitoring mechanism also could be put in place to ensure full implementation, continued compliance, and confidence of all parties in the new regime.

Based on shared interests and goals, the parties would forge an executive-level, multilateral agreement outlining the intra-framework policies and processes for technology sharing as well as separate policies, procedures, and controls for technology transfers and re-transfers to parties outside the framework, including penalties under national laws for violations of these controls. This “coalition of the willing” would determine which technologies should be shared more freely among the partners and which would require more strict controls by the partners than those agreed to in other multilateral regimes.<sup>54</sup> It is expected that the list of technologies that meet these standards would be a relatively short list of critical technologies. The effectiveness and sustained cohesion of extra-framework policies and controls also will

depend heavily on the partners' confidence in the arrangement, the members' willingness to establish an enhanced process of intelligence sharing, and each member's commitment to deter violations by establishing and rigorously enforcing appropriate penalties for violations. Finally, it is expected that the supplemental framework can and will be expanded beyond its founding members based on criteria agreed upon by all the parties.

### ***Criteria and Incentives for Membership***

Since the proposed new framework is conceived as a coalition of like-minded states to supplement existing multilateral export control efforts, important criteria for participation in the new framework would be membership and good standing in the current multilateral nonproliferation regimes as well as a willingness to work cooperatively toward greater harmonization of export control policies and procedures with like-minded partners. In addition to a demonstrated commitment to nonproliferation and a rigorously enforced domestic export control system, strong political relations, shared values and interests, and a history of cooperation also would help identify prospective partners for this new regime. Since one of the incentives for participation in this supplemental arrangement is the prospect of freer trade in goods and technologies that serve common security interests, prospective members of this new regime also must demonstrate a shared interest in facilitating and intensifying defense cooperation with the United States and other parties to the agreement. According to these standards, and due to the significant efforts in Europe to consolidate defense industrial activities, the most obvious and immediate potential partners in the proposed framework would be any country that enjoys exemptions from the International Traffic in Arms Regulations (ITAR), as well as the six countries that are signatories to the Letter of Intent (LOI) and Framework Agreement—France, Germany, Italy, Spain, Sweden, and the United Kingdom. Other allies and friends of the United States could be included initially or over time.

### ***Long-Term Outlook***

For the foreseeable future, the proposed framework would be intended to supplement, not replace, existing multilateral regimes. Given the multiplicity and diversity of states capable of producing and exporting militarily relevant goods and technologies, the Study Group concludes that the number of states willing to harmonize their export control policies to achieve shared

aims and interests is likely to remain a smaller set of countries than those participating in the more inclusive multilateral regimes that now exist, particularly the Wassenaar Arrangement for regulation of trade in conventional arms and dual-use items.

The Study Group acknowledges the possibility that a larger number of states could, over time, come to share common interests, values, and perceptions of the threat posed by proliferation and the spread of advanced military capabilities, and therefore be willing to assume additional responsibilities and obligations. Under these circumstances, the proposed new supplemental framework could conceivably, in time, supplant the Wassenaar Arrangement and/or the merged regimes if it is successful and if the membership were to grow to similar proportions. However, to reiterate, this is *not* the goal in establishing the new framework, which will be more effective in the short run as a small group of states that are both core supporters of the nonproliferation regimes *and* close US partners in defense industrial endeavors. Accordingly, it is imperative that significant reforms be made concurrently to improve the existing regimes. Finally, the response to, and success of, the supplemental regime will rest on the implementation of comprehensive reforms of the US export control system.

**RECOMMENDATION 3: *Seek Simultaneous Reforms of the US Export Control Process***

It is the consensus of the Study Group that the United States must move to reform its export control system in response to fundamental changes in the global security and trade environments. A bipartisan, comprehensive approach to reform will be necessary in order to provide confidence—in both domestic and international partners—of the US commitment to implement the proposed new framework agreement. The most immediate steps and basic principles for reforming US export controls are outlined below.

***Reauthorize the Export Administration Act***

The first step toward updating US export controls is the long-term reauthorization of the Export Administration Act (EAA), which, despite numerous attempts to revive it, lapsed in 1994 and has recently been renewed, but only temporarily. As many commentators have noted, it is difficult for the United States to make a compelling case for more robust, legally binding export control policies abroad when US law had been allowed to lapse for so long. The temporary measure approved in November 2000 will expire if action is not taken by August 2001 to renew

the EAA.<sup>55</sup> Therefore, the Study Group encourages Congress and the administration to reach agreement on a balanced and updated EAA reauthorization measure as soon as possible.

### ***Reform US Policies and Procedures for Munitions***

The next critical step is to overhaul the regulatory policies and processes for approving export licenses for munitions to more clearly reflect US national security interests, modern US defense needs, and global trade dynamics. Specific reforms related to arms transfers must be, and to some extent are already being, analyzed in a more comprehensive and detailed manner than is possible in this report.<sup>56</sup>

### ***Principles for Reform of US Export Controls***

Members of the Study Group agree on several basic principles for reform:

- *Harmonization:* Multilateral cooperation on export controls is the most effective and reliable means of stemming technology transfers of many critical technologies while assuring the military's access to technology and improved interoperability.
- *Predictability:* Reforms in the United States, as elsewhere, should lead to a more consistent and transparent system of export controls.
- *Flexibility and Dynamism:* Given the accelerating pace of technological innovation and diffusion, export controls can slow but not halt the worldwide diffusion of technology. A sensible control regime must be adapted to the pace of change in the global economy and should reflect modern business practices. The list of technologies deemed critical for US national security should be reviewed regularly and pared down to those for which the United States and its closest partners remain major or unique suppliers.<sup>57</sup> Export controls on items that are uncontrollable no longer serve their purpose.<sup>58</sup>
- *Efficiency:* Reforms should include additional measures to achieve a more streamlined process. The Study Group recommends that the Bush administration continue and further efforts to employ a modern, shared information management system for processing license applications in a manner that is responsive to current business cycles and that allows analysis of cross-cutting issues and cumulative effects. Although progress recently has been made toward this goal, additional efforts are needed.<sup>59</sup>



- *Coherence:* To be maximally effective, export controls should be embedded in a comprehensive and coherent nonproliferation strategy. Controls on sensitive technologies can continue to make a positive and important contribution to US national security, but must be supplemented by other nonproliferation policies and instruments.

For both munitions and dual-use controls, the Study Group further recommends that industry be integrally involved in the reform process, through a consultative relationship with the US government and as a partner in efforts to ensure maximum compliance with national regulations and controls. As day-to-day participants in the international economy, many companies have unique insights to offer regarding the implications of globalization for the control of technology and the effectiveness of export controls. Moreover, the predominance of dual-use items and the growing reality of more consolidated national defense industries that rely on component suppliers in many different countries require industry in the United States and elsewhere to become even closer partners in the effort to control transnational transfers of sensitive technologies. This reality already has been acknowledged by some governments in Europe and Asia that have codified new roles and responsibilities for industry in assuring export control compliance. At the same time, governments must help companies, particularly small firms, that face multiple international bureaucratic and regulatory requirements so as not to add unnecessary administrative burdens and costs that have arguably little security benefit. It should be noted that several large defense industry companies in the United States, Europe, and elsewhere have taken significant steps toward improving internal control, monitoring, and compliance measures to prevent unwitting export control violations, practices that were catalogued in the recent Nunn–Wolfowitz Task Force Report.<sup>60</sup>

### **Part III: A Partnership for Change**

Finally, successful reform of the multilateral framework for export controls will require coordinated and carefully sequenced actions, effective domestic and international partnerships, and, above all, sustained and concerted US leadership.

#### ***US Leadership is Necessary***

Efforts to improve and supplement existing multilateral regimes should proceed in tandem with initiatives to rationalize and streamline the US export control system. The Study

Group urges this two-pronged approach for several reasons. First, a demonstration of serious intent to address the shortcomings in the current US system could help win the confidence and support of allies and friends who remain wary of new reform initiatives and see reforming the US system as the more urgent problem. The reverse is also true. Political support in the United States for reform of the existing multilateral system will be difficult to muster unless partner nations are willing to commit themselves to more effective and commonly shared constraints on the export of sensitive technologies.

Strategic partnerships, both at the national and international level, also will be required. The President of the United States has a unique and essential role to play in spearheading reform and coordinating the components of a comprehensive export control reform program. The US Congress must be an equal partner in the process, initiating legislative review and reform, exercising vital oversight of the step-by-step reform process, and supporting initiatives to improve US intelligence capabilities and strengthen the export control systems of other nations. Finally, the effective control of militarily sensitive technologies will depend on the involvement of industry at an early stage and throughout the reform process.

There is no substitute for US leadership in the reform process. If the United States signals that it is determined to achieve real reform—both at home and internationally—other nations will take the issue seriously and focus similarly high-level political attention on the deficiencies of their respective national policies and of existing regimes. Further, the United States has both the capabilities and resources to make a more compelling case regarding the risks of proliferation and the dangers associated with transfers of sensitive technologies to particular end-users. Information on suspect recipients and analysis of the cumulative effects of technology flows will be critical to winning over allies and friends who are ambivalent or uninformed about broader patterns of technology transfer and use, but open to persuasion based on clear and compelling evidence. Lastly, the United States can provide significant security and economic incentives to states that are prepared to deepen their cooperation regarding transfers of critical technologies in order to enhance defense cooperation and achieve common security objectives.

## Action Agenda: Reforming Multilateral Export Controls

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*The Study Group supports multilateral and US export control reform that takes into account both the protection of US national security and the profound economic and technological changes resulting from globalization. Within this framework, the Study Group recommends:*

- **RECOMMENDATION 1:** Over the short-run, maintain and improve the Wassenaar Arrangement and other multilateral arrangements; over the medium- to long-term, seek to merge the existing multilateral regimes into a single, maximally effective body, beginning with those focused on preventing WMD proliferation.
  - **RECOMMENDATION 2:** Work to establish a new supplemental framework for coordinating multilateral export controls based on harmonized export control policies and enhanced defense cooperation with close allies and friends.
  - **RECOMMENDATION 3:** Seek simultaneous reforms of the US export control process.
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### ***Recommended Presidential and Executive Branch Actions:***

- *Coordinate US diplomatic effort to achieve short-run, step-by-step reforms of the Wassenaar Arrangement*
- *Establish an Executive Council to enhance cooperation among existing multilateral regimes and work toward long-term merger\**
- *Establish a supplemental multilateral framework with close allies and friends to harmonize export controls on third-party transfers and to allow enhanced defense cooperation*
  - *Engage in a dialogue on defense cooperation and harmonization of export controls to identify common interests and security concerns*
  - *Develop functional approach to safeguard technologies shared among the parties but controlled outside the framework*
  - *Establish joint monitoring mechanism for the new framework*
  - *Forge executive-level, multilateral agreement establishing policies and processes for technology sharing and re-transfers to parties outside the framework*

\* It is expected that all commitments and incentives established under the proposed supplemental framework will be consistent with members' obligations under other multilateral export control regimes.

## **Action Agenda: Reforming Multilateral Export Controls**

(Continued)

- *Convene an interagency Deputies Committee to coordinate the application of export control reforms and to address interagency issues on an ongoing basis*
- *Work with Russia and China to encourage responsible export control behavior*
- *Revise International Trafficking in Arms Regulations (ITAR) to be more responsive to modern defense and technological trends*
- *Improve US intelligence capabilities to monitor technology transfers and acquisitions; enhance joint intelligence sharing with allies and friends in new framework; and strengthen US cooperation with customs and law enforcement officials, particularly in partner countries*

### ***Recommended Congressional Actions:***

- *Reach agreement on long-term reauthorization of the Export Administration Act (EAA)*
- *Hold oversight hearings on multilateral export control arrangements as reform initiatives go forward*
- *Review and revise Arms Export Control Act (AECA)*
- *Require annual report from president on US efforts to strengthen existing regimes and to promote multilateral approaches to export controls*
- *Increase appropriations for 1) US intelligence services to enhance monitoring and analysis of technology transfers and 2) for cooperative international training programs to improve enforcement of export control laws*

### ***Recommended Industry Actions:***

- *Create a senior-level Industry Advisory Group to provide advice on an ongoing and coordinated basis to the Deputies Committee about export control effectiveness and reform*
- *Enhance intra-industry cooperation to manage and share information on compliance measures, suspect end-users, and patterns of technology transfer*

***Presidential Leadership is Essential***

Multilateral reform efforts are unlikely to succeed without strong, sustained presidential leadership and involvement. Presidential leadership must comprise international engagement as well as direction and oversight of the interagency process in the United States. With allied leaders, the president's personal engagement can be vitally important to the process of building confidence in US motivations and support for US initiatives. At home, past experience suggests that sometimes only presidential-level leadership is sufficient to overcome bureaucratic obstacles to change, and to resolve the interagency differences that are virtually certain to arise.

The Study Group welcomes President Bush's campaign pledge to "revitalize" multilateral cooperation on export controls and calls on the president to take the lead in championing a comprehensive reform of the multilateral export control system. The reform package should comprise three simultaneous, yet coordinated actions. First, the Study Group urges President Bush to begin a dialogue with US allies and friends about the need for a new approach to restraints on technology transfers, with the intent of securing the participation of partner nations in a new framework for enhanced defense cooperation and harmonized export controls vis-à-vis third-party end-users. Such a dialogue should be complemented by US diplomatic efforts to achieve short-run, step-by-step reforms of the Wassenaar Arrangement, including progress toward more focused information exchanges, a strengthened Wassenaar Secretariat, and other procedural and institutional changes that would allow Wassenaar to achieve its stated objectives. Additionally, the Study Group would advise that the president make technology transfers and export controls a high priority issue in bilateral relations with both Russia and the People's Republic of China, and urge other allies and friends to do so as well, in order to secure solid commitments from both countries to responsible export control policies and procedures.

Although the responsibility for providing the United States with a firmer legislative foundation for export controls must lie with the legislative branch, presidential support for a balanced and updated EAA reauthorization measure and for Congressional review and reform of the legislation governing munitions export controls would bolster these efforts. In conjunction with Congressional consideration of US controls, the Study Group recommends a presidential initiative to review and reform the ITAR.

Second, to ensure that reform efforts remain on track, the Study Group recommends that the president convene an interagency Deputies Committee, which would be responsible for

ensuring that presidential directives concerning export control reform are consistently applied across agencies and that US export control policies remain internally consistent and up-to-date. The Committee also would deal with political and interagency issues that are likely to arise. For example, the Deputies Committee could be tasked, among other things, with the design and implementation of a new information management system to enhance interoperability between the Departments of Defense, State, and Commerce that would meet the needs of all agencies involved in the US export control system.

Finally, the Study Group urges President Bush to take actions to improve US intelligence capabilities to monitor and analyze patterns of technology transfer and acquisition, which would assist the respective agencies in discovering violations of export controls. Similarly, US officials should be authorized to explore with allies and friends appropriate mechanisms for enhanced joint intelligence sharing. While the United States must be attentive to the risks associated with intelligence cooperation, the Study Group believes that cautious but enhanced sharing of select intelligence would support harmonization efforts and is critical to the success of the proposed new framework for defense cooperation. Finally, the administration should support and enhance US cooperation with customs and law enforcement officials in partner countries.

### ***Congress Has a Vital Role to Play in Reform***

The US Congress must bear joint responsibility for efforts to create an effective system for controlling militarily sensitive goods and technologies. Only the US Congress can address the legal underpinnings of current US export controls and hold the executive branch accountable for the impact of changes in the existing system on US national security and interests as reform proceeds.

The US Congress is uniquely responsible for the legislative foundation for controls on sensitive technologies and for ensuring that US statutes and license requirements are appropriate to current economic, technological, and strategic realities. The US Congress should work to reach agreement on long-term reauthorization of the Export Administration Act. The next logical step would be a congressionally mandated review and reform of the Arms Export Control Act (AECA).

While progress toward achieving a more efficient and streamlined US export control process could help reduce the burden now placed on US licensing officers and administrators, the volume of transactions of potential military application is likely to continue to grow due to the effects of globalization. Thus, it is essential that the US agencies charged with monitoring, licensing, and enforcing updated US regulations be provided with adequate funds to fulfill their responsibilities efficiently. The US Congress therefore should provide the funds necessary to adequately staff all agencies involved in the administrative and licensing review process.

Ongoing congressional oversight will be necessary to ensure that a process of step-by-step reform proceeds prudently and without injury to US national security. To this end, the Congress should encourage the committees of jurisdiction to hold hearings on the impact of trade controls and the operation of multilateral export control arrangements when and as reform initiatives go forward. Further, the Congress should require that the president continue to report annually on the results of US efforts to strengthen existing regimes, further promote multilateral approaches to export controls, and assess the implications of specific changes for the prevention of transfers of sensitive technologies to countries or regions of concern.

Finally, congressional support for enhanced US intelligence capabilities and targeted international cooperation programs are a wise investment in US national security. Increased appropriations for US intelligence services would enhance US efforts to monitor patterns of technology acquisition and transfer and to enforce export controls more rigorously. Additionally, international training programs and law enforcement cooperation are valuable tools for assisting other countries seeking to create and sustain effective national export control systems and deserve continued support.

### ***Industry Must Be Part of the Solution***

The third partner in a successful program of comprehensive reform must be the industries most directly involved in, and affected by, controls on the transfer of technology and goods. Industry should therefore be involved from the outset in initiatives to rationalize and improve the US export control system and to harmonize international export control practices and policies.

Industry is well positioned to understand the implications of economic globalization for trade controls, the impact of export controls on US business, and the competitiveness of US

industry more generally. Many multinational corporations deal with the realities of global interdependence on a daily basis and understand both the limits and potential of controls on certain technologies. Further, the increasingly international structure and nature of large companies subjects them to the rules and regulations of many different states, making companies de facto silent partners in multilateral discussions of export controls.

The Study Group therefore recommends that industry and government enter into a meaningful and regular dialogue on how to make existing and reformed controls, both national and multilateral, truly effective. A formal “consultative partnership” would help to establish a shared understanding of the impact of trade controls. Where the effects of export controls are negative for business, but unintended or considered necessary, then a broader policy debate would be appropriate. If the effects are unintended and deemed undesirable, then government and industry should consult each other on modifications to existing policies and processes that would protect US national security interests without unduly undermining US competitiveness.

Although various industry advisory bodies related to export control issues already exist, the Study Group recommends that these efforts be reformed so as to reduce the incidence of “stovepiping” these interactions and to elevate and coordinate industry involvement above the level of technical consultations. Specifically, this Group advises the president to form a senior-level Industry Advisory Group that would provide advice and input to the Deputies Committee. Such an integrated approach would ensure that industry advice to US government agencies was more consistent internally. In addition, the involvement of senior-level representatives could provide valuable insights regarding the broader impact of specific policies and processes on US industry and economic competitiveness. The Industry Advisory Group, therefore, should meet regularly with the Deputies Committee.

## **Conclusion**

The present approach to the control of militarily sensitive technologies has failed to adapt fully to the transformation of the global economic system, undermining the ability of the United States to safeguard the complete range of vital national security interests and objectives. Reform of the current system should be a high priority.



Reform efforts should be guided by the need to create a system that is effective and thus more multilateral, harmonized, and discriminating, as well as flexible and dynamic. To be successful, a comprehensive approach will be needed, comprising multilateral initiatives as well as progress toward US reform and engaging all of the significant stakeholders in this effort—both at home and abroad.

The time for action is now. A convergence of interests, concerns, and circumstances has created a unique, and perhaps fleeting, opportunity for US leadership and presidential action. That convergence entails three separate but related alignments, the duration of which is uncertain:

***Export Control Reform is a Bipartisan Issue***

Concern about the proliferation of WMD and advanced military capabilities transcends partisan boundaries. The experience of this Study Group demonstrates that it is possible to forge a bipartisan consensus in support of export control reform. Although differences exist on the details of implementation, there is broad agreement on the need for change and on a general approach to multilateral and US reform. Export control reform provides an opportunity for bipartisan action.

***Export Control Reform is a Public–Private Issue***

Similarly, concern about the problems besetting the current system is not limited to those in the US government, but shared widely by industry representatives in the United States and in allied nations, as well as by non-governmental experts. While industry, non-governmental organizations, and the government may prescribe different remedies, they agree that the current system needs to adapt to new global realities.

***Export Control Reform is a US–Allied Issue***

Frustration with the problems caused by disparate export control policies and procedures appears to be growing not only in the United States but in allied and friendly nations as well. US–allied differences over export controls can be an irritant in political relations, but also a potentially powerful motivator for reform. The political window of opportunity may be limited, however. The consolidation of European defense industry and initiatives among the LOI-six to harmonize their respective export control policies are a train in motion, which could gather such momentum that it can no longer be redirected to preserve a common defense industrial base.

The opportunity created by this unique convergence—between political parties, between government and industry, and between the United States and its key allies and friends—is unlikely to reemerge anytime soon. Moreover, unless reform efforts are undertaken soon, the issues surrounding export control reform could become so contentious that the goodwill of all parties is eroded, undermining their ability to find solutions that serve common interests and address common concerns. This unique opportunity should not be squandered.

Finally, the costs of inaction are high. On the surface, the issue of export control reform would appear to many an arcane matter, of interest only to an identifiable group of “experts.” In fact, if unremedied, the problems inherent in the existing export control system could have a cascading, negative influence on US power, prosperity, and security. The strategy outlined herein for a new, more effective multilateral export control framework would enhance US global leadership and long-term economic opportunities.

## NOTES

<sup>1</sup> The authorizing language for the Study Group is contained in the Conference Report, National Defense Appropriations Act of 2000, Public Law 106-79. The relevant language falls under “Congressional Special Interest Items.” The text, as approved October 14, 1999, states: “The conferees direct that the Department convene a Study Group of senior-level executive branch and congressional officials, as well as outside experts, to develop the framework for a new effective, COCOM-like agreement that would regulate certain military useful goods and technologies on a multilateral basis.”

<sup>2</sup> In the course of its work, the Study Group considered the accomplishments and shortcomings of existing regimes and alternative approaches to reform, ranging from minor modifications to fundamental changes in the existing system. For an assessment of current regimes, see Richard T. Cupitt, *Multilateral Nonproliferation Export Control Arrangements in 2000: Achievements, Challenges, and Reforms*, Working Paper no. 1, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: The Henry L. Stimson Center/CSIS, forthcoming). For a review and analysis of alternative multilateral frameworks, see Frank M. Cevasco, *Survey and Assessment: Alternative Multilateral Export Control Structures*, Working Paper no. 3, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: The Henry L. Stimson Center/CSIS, forthcoming).

<sup>3</sup> This report uses the term globalization as defined in the December 1999 *Final Report of the Defense Science Board Task Force on Globalization and Security*, in which globalization connotes “the integration of the political, economic and cultural activities of geographically and/or nationally separated peoples,” p. i. See US Department of Defense, Office of the Undersecretary of Defense for Acquisition and Technology, *Final Report of the Defense Science Board Task Force on Globalization and Security* (Washington, DC: US Government Printing Office, December 1999).

<sup>4</sup> For a nation-by-nation measurement of globalization, see “Measuring Globalization,” *Foreign Policy*, January/February 2001, [http://www.atkearney.com/pdf/eng/Globalization\\_inde\\_S.pdf](http://www.atkearney.com/pdf/eng/Globalization_inde_S.pdf).

<sup>5</sup> *Final Report of the Defense Science Board Task Force*, p. 5.

<sup>6</sup> *Ibid.*, p. v.

<sup>7</sup> *Ibid.*, pp. 5-20.

<sup>8</sup> On the prospective growth in suppliers, see Defense Science Board Task Force, “Preserving a Healthy and Competitive US Defense Industry to Ensure our Future National Security: Final Briefing,” November 2000, p. 6.

<sup>9</sup> This is particularly true for items based on micro-processor technologies.

<sup>10</sup> For a summary and analysis of the divergent security challenges facing the United States, see National Intelligence Council, *Global Trends 2015: A Dialogue About the Future With Nongovernmental Experts*, NIC 200-02, December 2000.

<sup>11</sup> Nonproliferation Center, Director of Central Intelligence, *Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January Through 30 June 2000*, [http://www.cia.gov/publications/gian/bian\\_feb\\_2001.html](http://www.cia.gov/publications/gian/bian_feb_2001.html).

<sup>12</sup> For assessments of the ballistic missile threat, see testimony of Robert Walpole, National Intelligence Officer for Strategic and Nuclear Programs, before the Senate Subcommittee of International Security, Proliferation, and Federal Service, February 2000, [http://www.cia.gov/public\\_affairs/speeches/nio\\_speech\\_020900.html](http://www.cia.gov/public_affairs/speeches/nio_speech_020900.html); and National Intelligence Council, *Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015*, September 1999, <http://www.cia.gov/publications/nie/nie99msl.html>. See also the *Executive Summary of the Rumsfeld Commission to Assess the Ballistic Missile Threat to the United States*, July 1998, [http://fedbbs.access.gpo.gov/gpo\\_bbs/cia/bmt.htm](http://fedbbs.access.gpo.gov/gpo_bbs/cia/bmt.htm).

<sup>13</sup> As described by the US Defense Threat Reduction Agency, “Chemical and biological weapons, sometimes referred to as the ‘poor man’s nuclear weapons,’ pose a significant threat in the post-Cold War environment. The relative low cost and simplicity of their design and technology, in comparison to nuclear weapons, make them the weapons of mass destruction choice for a variety of rogue states and terrorist, non-state organizations” (see [http://www.dtra.mil/cb/cb\\_index.html](http://www.dtra.mil/cb/cb_index.html)). As demonstrated by

the attack on a Japanese subway by terrorist group Aum Shinrikyo, this is the case because “1) The formulas for nerve and blister agents are well-known; and 2) the ingredients for these weapons are readily available because they can be used to make legitimate everyday products, such as fertilizers, pharmaceuticals, and pesticides.” See “First Anniversary of Tokyo Subway Poison Gas Attack: Is the US Prepared for a Similar Attack,” Issue Brief, September 1996, available online at <http://www.stimson.org/cwc/issuebrf.htm>. The ability to engage in biowarfare and bioterrorism, moreover, could spread with advances in, and the diffusion of, biotechnology, nanotechnology, information technology, or new materials, etc. See Larry Lynn, *Forecasting Critical Military and Commercial Technologies: Potential Long-term Challenges for Export Controls*, Working Paper no. 5, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: Henry L. Stimson Center/CSIS, forthcoming).

<sup>14</sup> See, for example, The White House, *A National Security Strategy for a New Century*, which warned that “the United States must be prepared to fight and win under conditions where an adversary may use asymmetric means against us—unconventional approaches that avoid or undermine our strengths while exploiting our vulnerabilities. Because of our conventional military dominance, adversaries are likely to use asymmetric means, such as WMD, information operations, or terrorism” (December 1999).

<sup>15</sup> *Global Trends 2015*.

<sup>16</sup> During his confirmation hearing, Secretary of State Colin Powell characterized China as a “competitor [and] a potential regional rival,” adding, however, that China is not “our inevitable and implacable foe.” See statement by Secretary Colin L. Powell, January 17, 2001, Washington, DC, <http://www.state.gov/secretary/index.cfm?docid=443>.

<sup>17</sup> In 1999, the EU reiterated its commitment to a “strategy of comprehensive engagement with China.” See the communication from the European Commission, “Building a Comprehensive Partnership with China,” Brussels, March 25, 1998, COM (1998) 181, [http://europa.eu.int/comm/external\\_relations/china/com\\_98/index.htm](http://europa.eu.int/comm/external_relations/china/com_98/index.htm); and Report on the Implementation of the Communication ‘Building a Comprehensive Partnership with China’ COM (1998) 181,” Brussels, COM (00) 552, [http://europa.eu.int/comm/external\\_relations/china/report\\_2000.htm](http://europa.eu.int/comm/external_relations/china/report_2000.htm).

<sup>18</sup> See also Peter Rodman, *The Paradox of American Power*, Working Paper no. 8, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: The Henry L. Stimson Center/CSIS, forthcoming).

<sup>19</sup> See, for example, US Department of Defense, *Proliferation: Threat and Response* (Washington, DC: US Government Printing Office, January 2001).

<sup>20</sup> The Defense Trade Security Initiative, launched in May 2000, introduced regulatory and procedural changes in the defense export control system designed to accelerate the processing of munitions export licenses. This initiative represents the first major post-Cold War adjustment to the US defense trade controls system and is expected to directly impact over \$20 billion in US commercial defense trade each year. For a summary of the measures contained in the DTSI, see the State Department Press Release on the Defense Trade Initiative, May 24, 2000.

<sup>21</sup> On the need for interoperability, see General John M. Shalikashvili, Chairman of the Joint Chiefs of Staff, Joint Vision 2010, July 1996; and General Henry Shelton, Chairman of the Joint Chiefs of Staff, Joint Vision 2020, May 2000. Both the Defense Trade Security Initiative and the NATO Defense Capabilities Initiative are intended to address this requirement.

<sup>22</sup> Efforts to redress this gap are already underway under NATO’s Defense Capabilities Initiative (DCI). See the NATO Fact Sheet on the “Defence Capabilities Initiative,” <http://www.nato.int/docu/comm/1999/9912-hq/fs-dci99.htm>.

<sup>23</sup> See US Department of Defense, *Strengthening Transatlantic Security: A US Strategy For the 21<sup>st</sup> Century*, December 2000, p. 16.

<sup>24</sup> For an analysis of the influence of export controls on US military planning, see Dov Zakheim, *Export Controls and Military Planning*, Working Paper no. 7, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: The Henry L. Stimson Center/CSIS, forthcoming).

<sup>25</sup> The Study Group recognizes that foreign policy considerations are a critical element in export controls, but are, by their nature, variable. The Group's analysis and recommendations therefore focus primarily on export controls as they relate to US national security objectives, interests, and instruments.

<sup>26</sup> For an evaluation of COCOM, see Stephen D. Bryen, *The Future of Strategic Export Controls*, Working Paper no. 2, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: The Henry L. Stimson Center/CSIS, forthcoming).

<sup>27</sup> According to Wassenaar's Initial Elements, agreed to on July 11-12, 1996, the arrangement "will not be directed against any state or group of states and will not impede bona fide civil transactions. Nor will it interfere with the rights of states to acquire legitimate means with which to defend themselves pursuant to Article 51 of the Charter of the United Nations." For information on the Wassenaar Arrangement and its "Initial Elements," see the Wassenaar Arrangement's homepage, <http://www.wassenaar.org/docs/IE96.htm>.

<sup>28</sup> Article 51 of the UN Charter states that "Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security. Measures taken by Members in the exercise of this right of self-defence shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security." See <http://www.un.org/aboutun/charter/index.html>.

<sup>29</sup> Under the regime's provisions, member states agree to notify partner nations of transfers as well as denial of goods contained in "tier 1" of Wassenaar's control lists twice a year. Notification of export denials related to the second tier, as well as for a subset of very sensitive items, are to be submitted within 30 days and no later than 60 days. The reporting requirements have also been criticized because they follow the categories contained in the United Nations arms register, and thus exclude some categories of items—such as small arms—that could have negative effects on regional security; the requirements also omit information regarding transfers of spares and logistical support. See <http://www.wassenaar.org/docs/IE96.htm>.

<sup>30</sup> For information on areas of agreement and further consideration, see Public Statement, December 1, 2000, "The Sixth Plenary of the Wassenaar Arrangement," [http://www.wassenaar.org/docs/press\\_5.html](http://www.wassenaar.org/docs/press_5.html). First instituted in the United States in the 1980s with regard to nuclear-related exports, "catch-all" controls have been expanded under the Enhanced Proliferation Control Initiative (EPCI) to impede the export of any good or technology that the exporter "knows" or "is informed" will be used for WMD development or proliferation. For more information, see Brian Nilsson, "'Catch All' Controls: The United States Perspective," US Department of Commerce, press release, September 28, 2000, available online at <http://www.bxa.doc.gov/press/Archive2000/NilssonsOxfordSpeech.html>.

<sup>31</sup> This discussion draws on the insights gained through informal discussions with officials, parliamentarians, and experts in allied and friendly nations. For alternative European perspectives, see also Alexandra Ashbourne, *The United States and Multilateral Export Controls: The British Perspective*, Working Paper no. 6, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: The Henry L. Stimson Center/CSIS, forthcoming); and François Heisbourg, *From European Defense Industrial Restructuring to Transatlantic Deal?*, Working Paper no. 4, Study Group on Enhancing Multilateral Export Controls for US National Security (Washington, DC: The Henry L. Stimson Center/CSIS, forthcoming).

<sup>32</sup> "The Sixth Plenary of the Wassenaar Arrangement," [http://www.wassenaar.org/docs/press\\_5.html](http://www.wassenaar.org/docs/press_5.html).

<sup>33</sup> In December 1999, 17 senior diplomats from allied countries wrote a letter to former Secretary of State Madeleine Albright expressing shared concerns about the Department of State's licensing system. In a separate letter in October to the Department of Defense (DoD) Under Secretary Jacques Gansler, Manfred Bischoff, then-president and CEO of DaimlerChrysler Aerospace reportedly referred to DASA's intent to issue a directive to reduce dependency on US companies in order to secure more reliable sources of supply. See "Allies Call on Albright to Reform Export Controls," *Defense Daily*, January 6, 2000; FDCH Political Transcripts, "House Committee on International Relations Holds Hearing on Munitions Export Licensing," March 28, 2000; Joseph C. Anselmo, "Hamre: Export Delays Hurting US Alliances," *Aviation Week and Space Technology*, November 8, 1999, p. 34; and US Department of Defense, "Fletcher Conference on Strategic Responsiveness: Remarks as Delivered by Deputy Secretary of Defense John J. Hamre," press release, November 3, 1999.

<sup>34</sup> For an analysis of recent reports of inter-allied export control difficulties, see US General Accounting Office, Report to the Chairmen, Committee on International Relations and Committee on Armed Services, House of Representatives, *Defense Trade:*

*Analysis of Support for Recent Initiatives*, GAO/NSIAD-00-191 (Washington, DC: US Government Printing Office, August 2000). Some of the details involved in these cases have been disputed.

<sup>35</sup> The Center for International Trade and Security has compiled extensive information comparing the export control systems of numerous countries, but Richard Cupitt notes that significant knowledge gaps exist.

<sup>36</sup> In the case of a transfer of dual-use items, assurances apply to the reliability of the end-user; in the case of munitions exports to an allied nation, the issue concerns the reliability of the recipient government and of government systems for preventing the unauthorized diversion of weapons. For exports of commercial defense items (goods, services, or both), assurances regarding both end-user and government reliability are desired.

<sup>37</sup> See *Report of the Select Committee on US National Security and Military/Commercial Concerns with the People's Republic of China*, submitted by Mr. Cox of California, Chairman, Report 105-851, 105<sup>th</sup> Cong., 2d sess., US House of Representatives, May 25, 1999—Declassified version (Washington, DC: US GPO, 1999), chapter 11, "International Actions," para. 11, <http://www.house.gov/coxreport/cont/gncont.html>.

<sup>38</sup> *Final Report of the Defense Science Board Task Force*, p. vi.

<sup>39</sup> *Ibid.*, p. 32.

<sup>40</sup> See, for example, the *Statement of the Business Roundtable on Export Controls: A Plan for Comprehensive Reform*, February 9, 2001, <http://www.brt.org/document.cfm/501>.

<sup>41</sup> The text of this letter can be found on the website of the California Space Authority, <http://www.csta.net/cox.html>.

<sup>42</sup> The vote was 19 to 1 and was taken on March 22, 2001. See Senate Report 107-10.

<sup>43</sup> The June 2000 decision updated the 1995 control regime for dual-use goods and items. The issue of dual-use controls arose in the context of discussions in 1992 surrounding the completion of the Internal Market. Dual-use goods and items fall within the competence of the European Community by virtue of Article 133, which states that "The common commercial policy shall be based on uniform principles, particularly in regard to changes in tariff rates, the conclusion of tariff and trade agreements, the achievement of uniformity in measures of liberalization, export policy and measures to protect trade such as those to be taken in the event of dumping or subsidies." See Burkard Schmitt, "Toward a Common European Export Policy for Defense and Dual-use Items?," Working paper no. 9, Study Group on Enhancing Multilateral Export Controls for US National Security (The Henry L. Stimson Center/CSIS, forthcoming), fn 3.

<sup>44</sup> Under Article 223 of the Treaty of Rome, members can exclude arms production and trade from the competency of the European Community. In 1991 the EU convened a Working Party on Conventional Arms Exports (COARM), which began to promote a common arms export policy.

<sup>45</sup> The Code is still considered by many to be a "work in progress." In fall 2000, the EU was still working to finalize the common European List of military equipment as well as to define more precisely what constitutes an "essentially identical transaction." Further, a number of member states have required more complete information on the reasons for a license denial. The Code of Conduct has become part of the EU's *acquis communautaire*, which will make it binding on any new members as the EU expands eastward. For the text of the Code of Conduct, see <http://projects.sipri.se/expcon/eucode.htm>.

<sup>46</sup> The Agreement Concerning Measures to Facilitate the Restructuring and Operation of the European Defence Industry, referred to as the "Framework Agreement," was signed during the 2000 Farnborough Air Show, building upon a Letter of Intent (LOI) signed among the same six countries two years earlier.

<sup>47</sup> Article 1, p. (d), "Framework Agreement between the French Republic, the Federal Republic of Germany, the Italian Republic, the Kingdom of Spain and the United Kingdom of Great Britain and Northern Ireland Concerning Measures to Facilitate the Restructuring and Operation of the European Defense Industry." The six nations of the Framework Agreement have committed to develop common principles to govern the export to a non-party to the agreement of any defense goods developed or produced cooperatively among the six. Decisions are to be taken by consensus, following consultations among all participating parties in a joint production venture and will determine the characteristics of the equipment to be exported, including specifications on

restrictions and permitted export destinations. The text of the agreement can be found at <http://projects.sipri.se/expcon/loi/loisign.htm>.

<sup>48</sup> More specifically, then-Governor George W. Bush pledged to “revitalize multilateral cooperation to control the proliferation of the most critical technologies,” noting that “unilateral controls are typically ineffective and sometimes counterproductive.” Additionally, Bush proposed to “improve intelligence capabilities to discover violations of export controls” and to “impose stringent penalties on those firms guilty of serious export violations.” See “Governor Bush’s Export Control Initiative.”

<sup>49</sup> These views were reaffirmed in the public statement released following the 1999 Plenary. See [http://www.wassenaar.org/docs/press\\_5.pdf](http://www.wassenaar.org/docs/press_5.pdf).

<sup>50</sup> The United States has pushed for a “no-undercut” provision in the past, but has encountered resistance from key members. Wassenaar’s current no-undercut policy does not require prior notification.

<sup>51</sup> The purpose of the MTCR is to prevent the transfer of goods and technologies that would contribute to the proliferation of missile capabilities for the delivery of WMD. According to MTCR documents, “membership in the MTCR does not involve an entitlement to obtain technology from another partner and no obligation to supply it. . . . Partners are expected, just as in such trade between partners and non-partners, to exercise appropriate accountability and restraint in inter-partner trade.” (See the Information paper released by MTCR Members States following the 1997 Plenary Meeting in Tokyo.) In practice, however, the *perception* has arisen among some states that MTCR membership will facilitate access to dual-use technology. In part, this reflects the practice of relying on both “carrots and sticks” to secure compliance with nonproliferation standards, although enhanced access to MTCR-controlled technologies has not, in fact, actually figured in such efforts. Membership in MTCR may in fact facilitate transfers among states wishing to share technology. See Deborah Ozga, “A Chronology of the Missile Technology Control Regime,” *The Nonproliferation Review*, vol. 1, no. 2 (Winter 1994); David C. Isby, “Barriers to Proliferation and Pathways to Transfer: Building Ballistic Missile Capabilities Under MTCR,” Working Paper for the Rumsfeld Commission; and Henry Sokolski, “Space Technology Transfers and Missile Proliferation,” Working Paper for the Rumsfeld Commission.

<sup>52</sup> It is expected that all commitments and incentives established under the proposed supplemental framework will be consistent with members’ obligations under other multilateral export control regimes.

<sup>53</sup> Special provisions would have to be agreed for classified technology transfers, in a manner consistent with US national security.

<sup>54</sup> It is expected that all commitments and incentives established under the proposed supplemental framework will be consistent with members’ obligations under other multilateral export control regimes.

<sup>55</sup> On November 13, 2000, former President Clinton signed an amended bill (S.AMDT 4305) to re-authorize the Export Administration Act of 1979 for one year (see Public Law No. 106-508).

<sup>56</sup> The Business Roundtable, the Aerospace Industries Association, and a CSIS Working Group, among others, have recently examined possible reforms to munitions export controls.

<sup>57</sup> The Defense Science Board noted that the “leveling of the global military-technology play field” necessitates a change in the Department of Defense’s approach to technology security, the principal objective of which is “to help maintain the US military-technical advantage.” Specifically, the Task Force recommended that “DoD should attempt to protect for purposes of maintaining military advantages *only* those military and dual-use capabilities and technologies of which the United States is the sole possessor (and for which there are not functionally equivalent foreign counterparts), or which are effectively controlled by like-minded states.” See DSB Task Force on Globalization and Security, p. 35.

<sup>58</sup> The Study Group acknowledges that the US Department of Defense and US Department of State have agreed as part of the Defense Trade Security Initiative to review the United States Munitions List (USML) on an annual basis with a view towards refining USML categories to ensure that coverage is appropriate.

<sup>59</sup> The Los Alamos National Laboratory (LANL), for example, is developing and will maintain the Nuclear Suppliers’ Group “Information Sharing System,” to be utilized by all members of the NSG.

<sup>60</sup> According to a recent survey of 120 leading US exporters of strategic munitions and dual-use items, many of the companies surveyed had “adopted comprehensive export control compliance programs in recent years.” Nevertheless, the report also indicates that much more needs to be done in this regard if Industry is to receive more than a passing grade for export control compliance. (See Center for International Trade and Security, *Survey on US Industry Compliance and Export Controls*, 2000, [http://www.uga.edu/cits/news/news\\_us\\_indi\\_full.htm](http://www.uga.edu/cits/news/news_us_indi_full.htm).) For recommendations for instituting industry “best practices,” see the *Nunn-Wolfowitz Task Force Report: Industry “Best Practices” Regarding Export Compliance Programs*, July 25, 2000.



## **APPENDIX A: PROJECT PARTICIPANT LIST**

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## **APPENDIX B: CONSULTATIONS**

*[Please note: This Report does not necessarily reflect the views of any person, organization, or government agency listed below.]*

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### **Australia**

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- Embassy of Australia in Washington, DC

### **Belgium**

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- European Commission
- Belgian Ministry of Defense

### **Canada**

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- Embassy of Canada in Washington, DC

### **China**

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- Ministry of Foreign Affairs

**France**

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**Government**

- Ministry of Foreign Affairs
- Ministry of Industry
- General Secretary for National Defense (SGDN)
- Ministry of Defense
  - Cabinet
  - Division of Strategic Affairs
  - Division of Armaments

**Non-Governmental Organizations**

- Institut Français des Relations Internationales (IFRI), French Center on the United States [*Le Centre Français sur les États-Unis*]
- Center for Documentation and Research on Peace and Conflict [*Centre de Documentation et de Recherche sur la Paix et les Conflits*]
- Amnesty International [*Secrétariat National d'Amnesty International, Commission Transferts Militaires, de Sécurité et de Police*]
- Handicap International

**Industry**

- EADS (Aérospatiale-Matra)
  - Aérospatiale
  - MEADS International, Inc.
  - EADS International
  - Aérospatiale Matra–Missiles
- Thales (Thomson–CSF)

**Germany**

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**Government**

- Federal Chancellery
- German Foreign Office—Office of Export Controls
- Federal Ministry of Economics & Technology
- Green Party

**Non-Governmental Organization**

- German Council on Foreign Relations (DGAP)

**Industry**

- European Aeronautic Defence and Space Company (EADS)

***Italy***

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**Government**

- Foreign Affairs Ministry
- Defense General Staff

**Non-Governmental Organization**

- Institute for International Affairs [Istituto Affari Internazionali] (IAI)

**Industry**

- Finmeccanica
  - Alenia Aerospazio–Aerospace Division
  - Agusta
  - Marconi Communications
  - Alenia Marconi Systems

***Japan***

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- National Institute for Defense Studies
- School of International Public Policy, Osaka University

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***United Kingdom***

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**Government**

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- Ministry of Defense (MOD)
  - Defence Export Services Organisation (DESO)
  - Proliferation & Arms Control Secretariat
- Foreign & Commonwealth Office (FCO)
- Department of Trade & Industry (DTI)

**Non-Governmental Organizations**

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- Centre for European Reform (CER)
- King's College, Department of War Studies
- The Development Group

**Industry**

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